NuPRO-841

Full-Size Single Board Computer

User's Guide

Rev. 1.1

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Detailed Company Information			
Company/Organization			
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E-mail Address			
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Questions			
Product Model			
Environment to Use	OS: Computer Brand: M/B: CPU: Chipset: BIOS: Video Card: Network Interface Card: Other:		
Detail Description			
Suggestions to ADLINK			

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SECTION 1

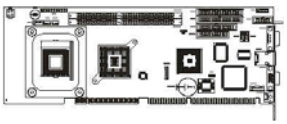
INTRODUCTION

1.1 Unpacking NuPRO-841 Series

1. Take out the NuPRO-841 series unit from the carton box, check if the unit is properly secure in the plastic bag.

2. Check the contents of the carton box:

◆ Single Board Computer

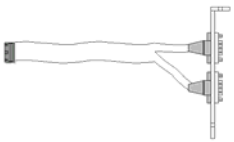


◆ Installation Guide

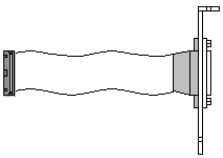
◆ Floppy ribbon cable

◆ ATA-66/100 HDD ribbon cable

◆ COM2 ribbon cable



◆ Printer ribbon cable



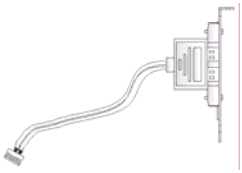
◆ K/B & M/S Y type cable

◆ Driver CD

◆ K/B-M/S extend to BP cable (6-pins to 5-pins)

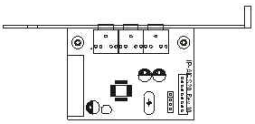
◆ ATX power control cable (4-pins to 5-pins)

◆ USB 2.0 cable (1 Set)



3. Optional Audio Card & Cable

◆ Audio Card



◆ Audio 9-pins round cable

1.2 Description

The NuPRO-841 Series single board computer is optimized for socket 478 FC-PGA processor, supporting 533/400MHz Front Side Bus, the memory can accommodate is up to 2GB DDR266/333 SDRAM. This board is based on the Intel® 845GV chipset and is fully designed for harsh industrial environment. The NuPRO-841 series is 533MHz FSB with chipset (GMCH) on-die VGA and one 10/100 Mbps Ethernet controllers. It is for CTI and high-performance applications.

The other I/O function include two serial ports, one parallel port, two ATA100 IDE interface, one FDC interface, four USB 2.0 ports, Watch Dog Timer and PS/2 Keyboard & Mouse.

In the meantime, the key components inside are chosen on the long-term availability criterion, such as Intel® chipset. We guarantee this product will be available. Even longer life is still possible which is dependent on the marketing situation. We also accept to extend the product life cycle based on OEM contract.

1.3 Features

- Intel® Pentium® 4 /Celeron® processor
- Intel® 845GV AGPset
- Support 2GB DDR266/333 SDRAM (Max.) Memory
- Front Side Bus Frequency: 400 / 533 MHz
- Chipset integrated graphic controller
- Single 10/100 Mbps Ethernet interface using Intel® 82562ET chip
- Software programmable watchdog timer
- Hardware Monitoring
- Support 3.3V
- AC97 Audio pin-header

1.3.1 Hardware Monitoring

Hardware monitoring allows you to monitor various aspects of your systems operations and status. The features include CPU temperature, voltage and RPM of fan.

1.3.2 I/O Shield Connector

The SBC is equipped with an I/O bracket. Please use the appropriate I/O shield (figure 1).

NuPRO-841 Series

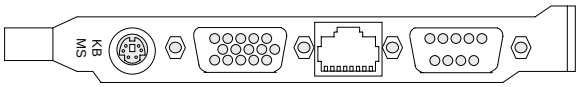


Figure 1: I/O bracket layout

1.3.3 NuPRO-841 Series Overview

Function / Model	NuPRO-841
◆ Chipset	845GV
◆ SCSI Function	/
◆ LCD Function	/
◆ VGA Function	⦿ (845GV)
◆ Ethernet Function	⦿
◆ AC97 Audio	Pin-header (Optional Audio Card)
◆ Two EIDE Interface	⦿
◆ One Floppy Interface	⦿
◆ Two Serial, One Parallel	⦿
◆ Four USB 2.0 ports	⦿

1.3.4 System Block Diagram

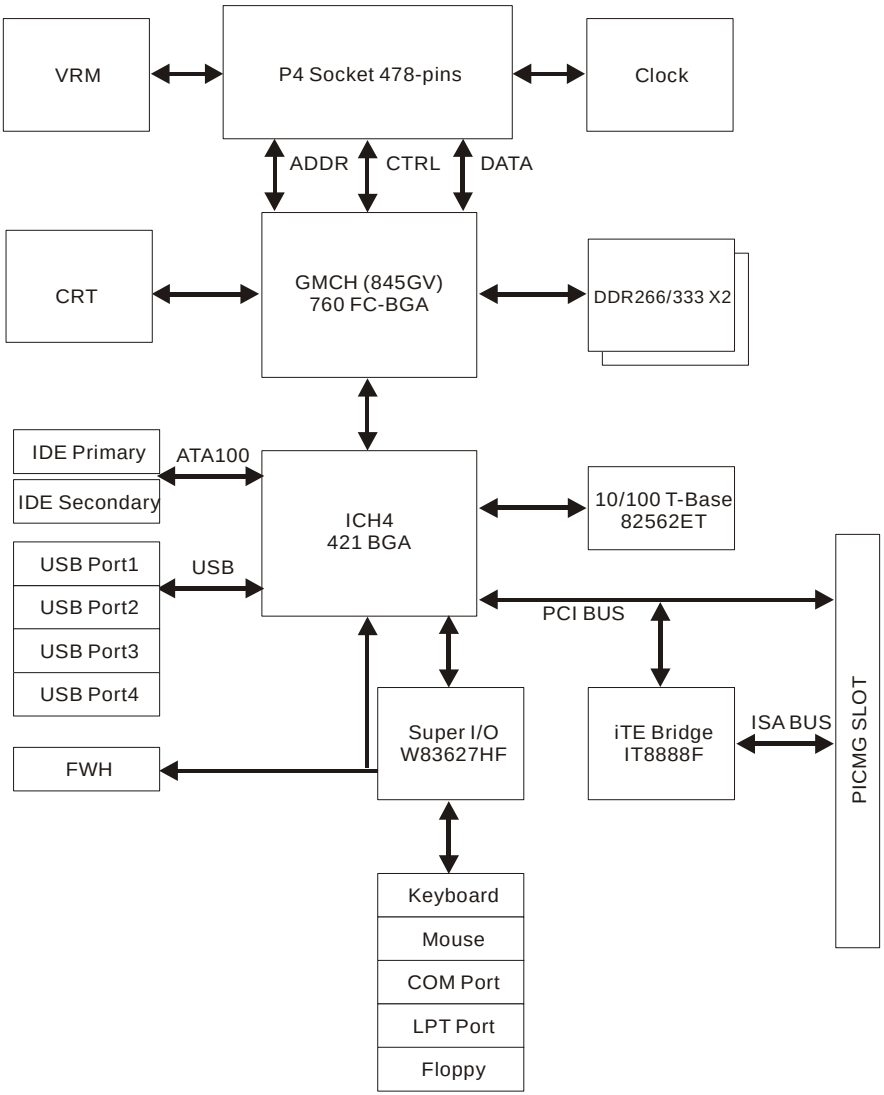


Figure 2: System Block Diagram

1.4 Specifications

NuPRO-841:

- **Processor:**
  - Socket 478 Processors, for Intel® Pentium® 4/ Celeron® Processor

- **Chipset:**
  - Intel® 845GV AGPset

- **Front Side Bus:**
  - 400 / 533 MHz

- **DRAM Module:**
  - 184pins DIMM x 2 for DDR SDRAM up to 2GB (max.)
  - Support 266/333 DDR SDRAM

- **VGA Function:**
  - Intel® 845GV Chipset integrated graphic controller

- **Ethernet Function:**
  - Intel® 82562ET Ethernet controller
  - For 10/100Base-TX Ethernet

- **Audio Function: (Optional)**
  - AC97 audio interface, by optional Audio card
  - 9-pins (pin-header) interface

- **Onboard I/O:**
  - On-Chip I/O integrated with K/B, Mouse, FDD, Parallel and Serial controllers

- **Onboard PCI / IDE:**
  - Intel® ICH4 South Bridge controller
  - PCI rev2.2 Compliant
  - ACPI Compliant Power Management
  - PCI Bus IDE Port with PIO /ATA-100 x 2 (Up to 4 Devices)

- **Bracket I/O Connectors:**
  - D-Sub Serial port (COM1)
  - Single RJ-45 connector
  - 15-pins D-Sub VGA connector
  - PS/2 Mouse and PS/2 style Keyboard

- **USB 2.0 Ports:**
  - 4 x USB 2.0 ports (pin-header)

- **BIOS:**
  - Award Plug & Play BIOS

- **Extended Function:**
  - Hardware Monitoring function
  - IrDA by pin-header

- **Form Factor:**
  - 13.3” x 4.8” (338 x 122mm)

- **Weight:**
  - 0.93lb (420g) --- NuPRO-841

SECTION 2

INSTALLATIONS

2.1 System Installation

2.1.1 CPU Installation

Carefully follow the steps below in order to install the CPU:

1. Check and confirm that the jumpers are correctly set for the CPU you are going to install (figure 3).

2. Lift the releasing lever of the Socket 478.

3. Align the pins of the CPU against the pinholes of the Socket 478. Be sure to pay attention to the orientation of the CPU.

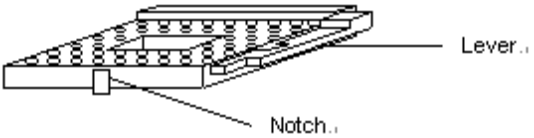


Figure 3: CPU Socket

4. Push down the CPU into the Socket 478.

5. Push down the release lever and lock it against the key hook.

6. Hook the hole in ZIF clip for the CPU cooling fan onto the notch on the socket 478.

7. Place the CPU cooling fan atop the CPU surface.

8. Push down the opposite side of the ZIF clip and hook it.

9. Slide the head of the clip to left and lock it.

10. Connect the cooling fan cable to the socket as shown below. Be careful not to place the cable on the CPU cooling fan.

Removing a CPU:

1. Before removing the CPU, turn off the NuPRO-841 Series power; then wait for about 3 minutes until the heat radiation plate of the cooling fan and the CPU cool down.

2. To remove the CPU, lift the releasing lever of the Socket 478.

Note: The CPU and the heat radiation plate are hot. They may cause burns.

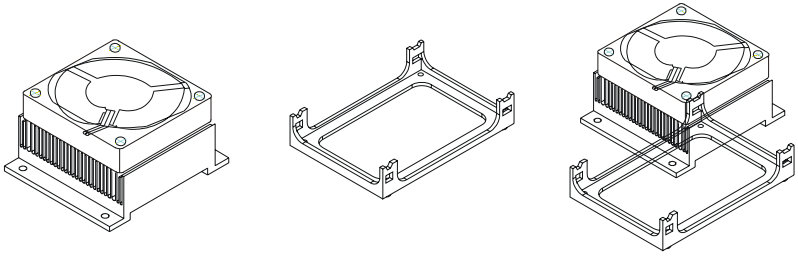
To remove the CPU, reverse the installation steps.

2.1.2 Heat Sink & Retention Module Installation

It is highly recommended that only NuPRO-841 Heat Sink + Fan (Figure 4), designed for use in the chassis be used -- the use of other heat sinks, including those boxed with CPUs, may result in damage to the NuPRO-841 SBC.

Make sure that good contact is made between the processors and the heat sinks. Insufficient contact, incorrect types of heat sinks, fans, or thermal compound used or improper amount of thermal compound applied on the CPU die can cause the processors to overheat, which may crash the system.

The Retention Module can prevent the board to crooked, so user must add the Retention Module to hold up the weight of Heat Sink & Fan.



Heat Sink & Fan (For P4 processor only) | Retention Module (For P4 Heat Sink & Fan) | Installation

Figure 4: Heat Sink Installation

2.1.3 Memory Module Installation

Figure 5 display the notch marks and what they should look like on your DIMM memory module.

DIMMs have184-pins and two notches, that will match with the onboard DIMM socket. DIMM modules are installed by placing the chip firmly into the socket at a 90-degree angle and pressing straight down (figure 6) until it fits tightly into the DIMM socket.

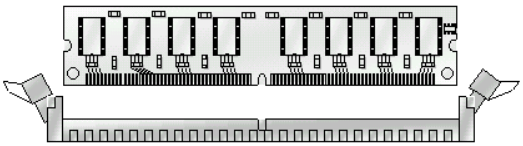


Figure 5: DIMM Memory and 184-pins Socket

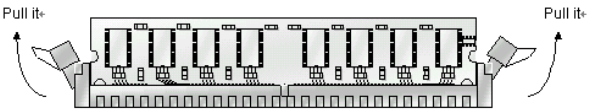


Figure 6: Memory Installation

Carefully follow the steps below in order to install the DIMMs:

1. To avoid generating static electricity and damaging the DIMM, ground yourself by touching a grounded metal surface or using a ground scrap before you touch the DIMM.

2. Do not touch the connector of the DIMM. Dirt residue may cause a malfunction.

3. Hold the DIMM with its notch to the front side of the NuPRO-841 Series and insert it completely into the socket. A DIMM should be inserted into the inner socket first. Guiding the hole at each end of the DIMM over the retaining post at each end of the DIMM socket.

4. If you install two DIMMs, install the second DIMM using the same procedure as above.

5. If DIMM does not go in smoothly, do not force it. Pull it all the way out and try again.

6. Make sure the DIMM is properly installed and locked by the tabs on both sides of the socket.

Removing a DIMM:
To remove the DIMM, use your fingers or a small screwdriver to carefully push away the plastic tabs that secure the DIMM at each end. Lift it out of the socket.

Make sure you store the DIMM in an anti-static bag and must be populated the same size and manufactory of memory modules. .

2.1.4 Setting Jumpers and DIP Switches

There are jumpers and DIP-switches on the system board of the NuPRO-841 Series. You can set the jumpers to make the necessary operations.

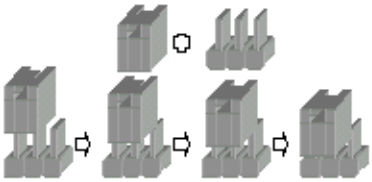


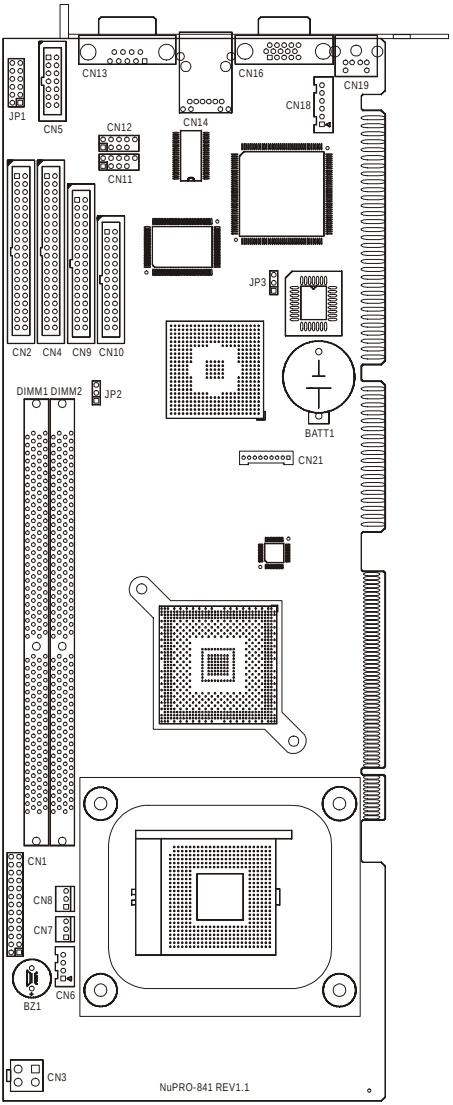
Figure 7: Jumper Connector

For any three-pins jumpers (Figure 7), the jumper setting is 1-2 when the jumper connects pin 1 and 2. The setting is 2-3 when pin 2 and 3 are connected and so on. You see a number " 1 " and a " 3 " printed on the circuit board to identify these pins. And also, there is a second way of indication – one of the lines surrounding jumpers is thick, which indicates pin NO.1.

To move a jumper from one position to another, use needle-nose pliers or tweezers to pull the pin cap off the pin and move it to the desired position.

2.2 Board Layout

Jumper & Connector Location



2.3 Jumper Setting

Table for Jumper Location Description:
Use the information in the following table to change the jumpers and the DIP switches.

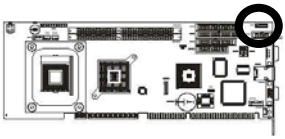
Jumpers	Functions
JP1	COM Port Setting Select
JP2	Watchdog Timer Setting Select
JP3	Clear CMOS Setting Select

In order to set up the correct configuration, here is the description about how to set the jumpers to enable/disable or change functions. All jumpers' location please refer to jumper location diagram.

◆ **COM Port Setting Select: JP1**

Function	JP1					
	1-2	3-4	5-6	7-8	9-10	11-12
RS-232 (Default)	Off	Off	Off	Off	Off	On
RS-422	On (Term.)	On (Term.)	Off	On	On	Off
RS-485	On (Term.)	On (Term.)	On	Off	On	Off

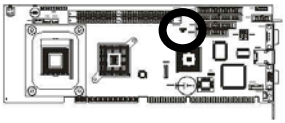
- **Location:**



◆ **Watchdog Timer Setting Select: JP2**

Function	JP2
NMI	1-2
Reset System (Default)	2-3

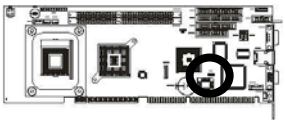
- **Location:**



◆ **Clear CMOS Setting Select: JP3**

Function	JP3
Normal (Default)	1-2
Clear CMOS	2-3

- **Location:**



2.4 Connector's Description

Connector Location

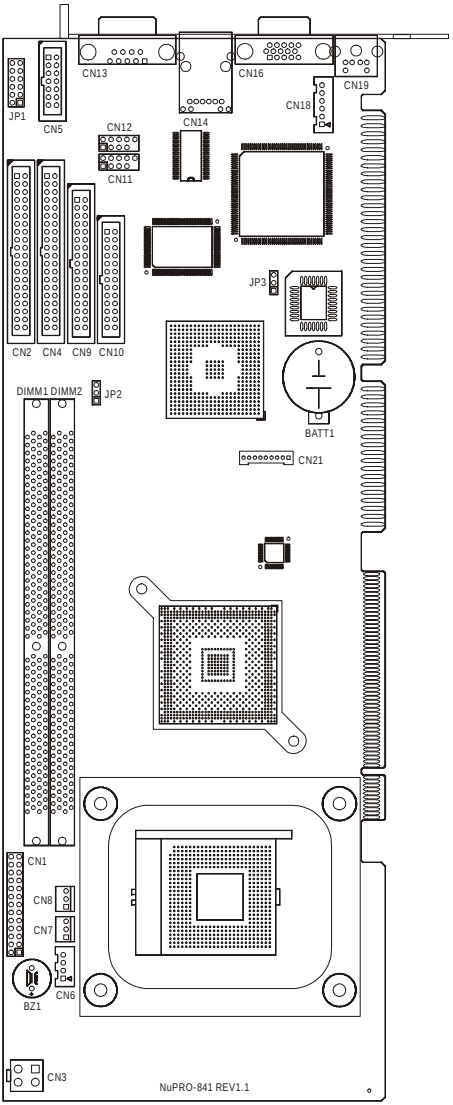


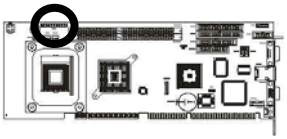
Table for Connector's Location Description:
Use the information in the following table to change the connector.

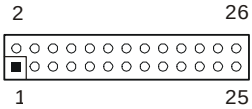
Connectors	Functions
CN1	System Panel Indicate Connector
CN2	Primary IDE Connector
CN3	ATX 12V Power Connector
CN4	Secondary IDE Connector
CN5	COM2 RS-232/422/485 Serial Port Connector
CN6	ATX Control Power Connector
CN7	FAN2 System (Chassis) Power Connector
CN8	FAN1 CPU Power Connector
CN9	Floppy Disk Connector
CN10	Parallel Port Connector
CN11	USB0/1 Port Connector
CN12	USB2/3 Port Connector
CN13	COM1 RS-232 Serial Port Connector
CN14	LAN (82562ET) RJ-45 Connector
CN16	CRT VGA Port Connector
CN18	External Keyboard & Mouse Connector
CN19	PS/2 Keyboard & Mouse Connector
CN21	Extension Audio (Pin-Header) Connector

◆ **System Panel Indicate Connector: CN1**

Pin #	Assignment	Pin #	Assignment
IR		**RESET**	
1	+5V	2	RESET+
3	FIRTX	4	RESET-
5	IRRX	**SPEAKER**	
7	Ground	8	SPKR (Default)
9	IRTX	10	BUZZ (Default)
HDD LED		12	Ground
13	HDLED+	14	+5V
15	HDLED-	**PWR LED**	
PWR ON		18	PWLED+
23	PWRBT+	20	NC
25	PWRBT-	22	PWLED-
		KEYLOCK	
		24	KBLOCK
		26	Ground

- **Figure:**

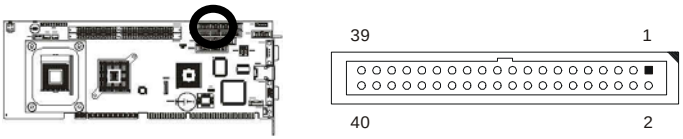




◆ **Primary IDE Connector (40-pins 2.54mm Pitch Pin-Header with Housing): CN2**

Pin #	Assignment	Pin #	Assignment
1	Reset IDE	2	Ground
3	Host Data 7	4	Host Data 8
5	Host Data 6	6	Host Data 9
7	Host Data 5	8	Host Data 10
9	Host Data 4	10	Host Data 11
11	Host Data 3	12	Host Data 12
13	Host Data 2	14	Host Data 13
15	Host Data 1	16	Host Data 14
17	Host Data 0	18	Host Data 15
19	Ground	20	NC
21	DRQ 0	22	Ground
23	Host IOW	24	Ground
25	Host IOR	26	Ground
27	IOCHRDY	28	Host ALE
29	DACK 0	30	Ground
31	IRQ 14	32	No Connect
33	Address 1	34	No Connect
35	Address 0	36	Address 2
37	Chip Select 0	38	Chip Select 1
39	Activity	40	Ground

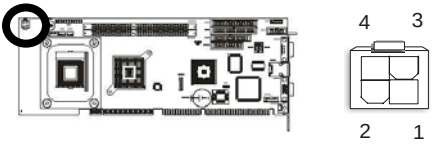
● **Figure:**



◆ **ATX 12V Power Connector: CN3**

Pin #	Assignment	Pin #	Assignment
1	Ground	2	Ground
3	+12V	4	+12V

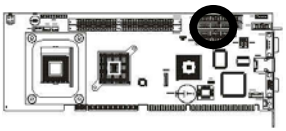
- **Figure:**

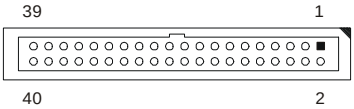


◆ **Secondary IDE Connector (40-pins 2.54mm Pitch Pin-Header with Housing): CN4**

Pin #	Assignment	Pin #	Assignment
1	Reset IDE	2	Ground
3	Host Data 7	4	Host Data 8
5	Host Data 6	6	Host Data 9
7	Host Data 5	8	Host Data 10
9	Host Data 4	10	Host Data 11
11	Host Data 3	12	Host Data 12
13	Host Data 2	14	Host Data 13
15	Host Data 1	16	Host Data 14
17	Host Data 0	18	Host Data 15
19	Ground	20	NC
21	DRQ 1	22	Ground
23	Host IOW	24	Ground
25	Host IOR	26	Ground
27	IOCHRDY	28	Host ALE
29	DACK 1	30	Ground
31	IRQ 15	32	No Connect
33	Address 1	34	No Connect
35	Address 0	36	Address 2
37	Chip Select 0	38	Chip Select 1
39	Activity	40	Ground

● **Figure:**

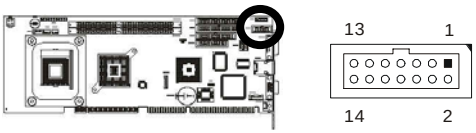




◆ **COM2 RS-232/422/485 Serial Port Connector (14-pins 2.54mm Pitch Pin-Header with Housing): CN5**

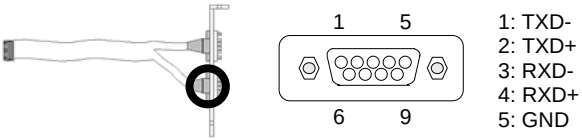
Pin #	Assignment	Pin #	Assignment
1	DCD (Data Carrier Detect)	2	RXD (Receive Data)
3	TXD (Transmit Data)	4	DTR (Data Terminal Ready)
5	Ground	6	DSR (Data Set Ready)
7	RTS (Request to Send)	8	CTS (Clear to Send)
9	RI (Ring Indicator)	10	Ground
11	TXD+ (Transmit Data+)	12	TXD- (Transmit Data-)
13	RXD+ (Receive Data+)	14	RXD- (Receive Data-)

- **Figure:**



Note: How to connect RS485 device with COM port ribbon cable?

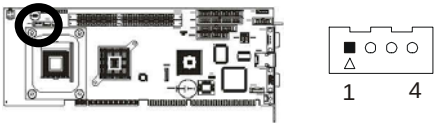
Our Industrial Board encloses a COM port ribbon cable for internal connection. RS422/485 device must connect to downside D-Sub with 5-pins cable and signal indication as below.



◆ **ATX Control Power Connector: CN6**

Pin #	Assignment
1	PME
2	5VSB
3	PWRON
4	Ground

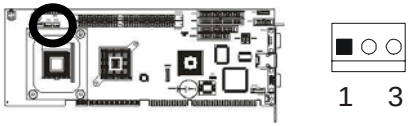
- **Figure:**



◆ **FAN2 System(Chassis) Power Connector: CN7**

Pin #	Assignment
1	Ground
2	+12V
3	Fan Status Signal

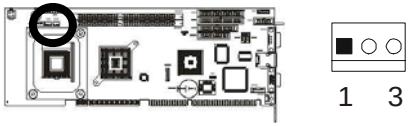
- **Figure:**



◆ **FAN1 CPU Power Connector: CN8**

Pin #	Assignment
1	Ground
2	+12V
3	Fan Status Signal

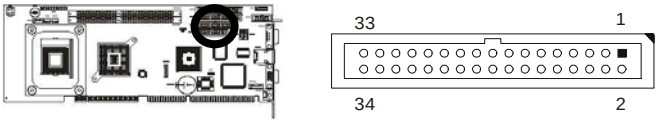
- **Figure:**



◆ **Floppy Disk Connector (34-pins 2.54mm Pitch Pin-Header with Housing): CN9**

Pin #	Assignment	Pin #	Assignment
1	Ground	2	Drive Density Selection
3	Ground	4	No Connect
5	Ground	6	Drive Density Selection
7	Ground	8	Index
9	Ground	10	Motor Enable 0
11	Ground	12	Drive Select 1
13	Ground	14	Drive Select 0
15	Ground	16	Motor Enable 1
17	Ground	18	Direction
19	Ground	20	Step
21	Ground	22	Write Data
23	Ground	24	Write Gate
25	Ground	26	Track 00
27	Ground	28	Write Protect
29	Ground	30	Read Data
31	Ground	32	Head Select
33	Ground	34	Diskette Change

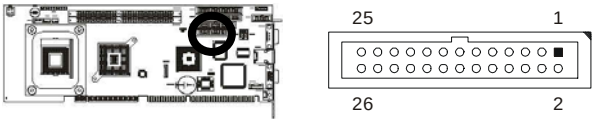
- **Figure:**



◆ **Parallel Port Connector (26-pins 2.54mm Pitch Pin-Header with Housing): CN10**

Pin #	Assignment	Pin #	Assignment
1	Line Printer Strobe	2	Auto Feed
3	PD 0, Parallel Data 0	4	Error
5	PD 1, Parallel Data 1	6	Initialize
7	PD 2, Parallel Data 2	8	Select
9	PD 3, Parallel Data 3	10	Ground
11	PD 4, Parallel Data 4	12	Ground
13	PD 5, Parallel Data 5	14	Ground
15	PD 6, Parallel Data 6	16	Ground
17	PD 7, Parallel Data 7	18	Ground
19	ACK, Acknowledge	20	Ground
21	Busy	22	Ground
23	Paper Empty	24	Ground
25	Select	26	NC

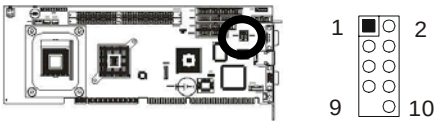
- **Figure:**



◆ **USB0/1 Port Connector (9-pins Pin-Header): CN11**

Pin #	Assignment	Pin #	Assignment
1	VCC	2	VCC
3	USB0 N	4	USB1 N
5	USB0 P	6	USB1 P
7	Ground	8	Ground
9	---	10	NC

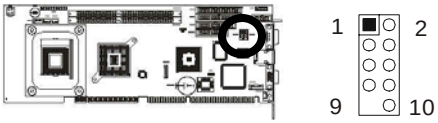
- **Figure:**



◆ USB2/3 Port Connector (9-pins Pin-Header): CN12

Pin #	Assignment	Pin #	Assignment
1	VCC	2	VCC
3	USB2 N	4	USB3 N
5	USB2 P	6	USB3 P
7	Ground	8	Ground
9	---	10	NC

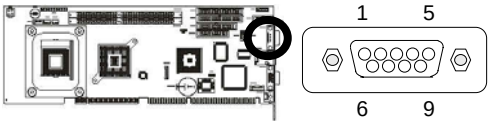
- **Figure:**



◆ COM1 RS-232 Serial Port Connector (D-Sub 9-pins Male): CN13

Pin #	Assignment	Pin #	Assignment
1	DCD (Data Carrier Detect)	6	DSR (Data Set Ready)
2	RXD (Receive Data)	7	RTS (Request to Send)
3	TXD (Transmit Data)	8	CTS (Clear to Send)
4	DTR (Data Terminal Ready)	9	RI (Ring Indicator)
5	Ground		

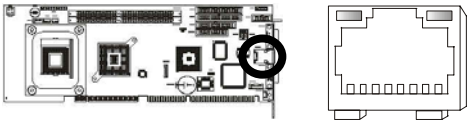
- **Figure:**



◆ **LAN (82562ET) RJ-45 Connector (RJ-45 Phone-jacket): CN14**

Pin #	Assignment	Pin #	Assignment
1	Transmit output (+)	5	NC
2	Transmit output (-)	6	Receive input (-)
3	Receive input (+)	7	NC
4	NC	8	NC

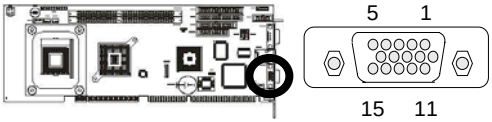
- **Figure:**



◆ **CRT VGA Port Connector (D-SUB 15-pins Female): CN16**

Pin #	Assignment	Pin #	Assignment
1	Red Color Signal	2	Green Color Signal
3	Blue Color Signal	4	5V
5	Ground	6	Ground
7	Ground	8	Ground
9	5V	10	Ground
11	5V	12	VGA DDA
13	H-Sync.	14	V-Sync.
15	SPCLK		

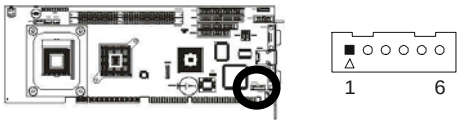
- **Figure:**



◆ External Keyboard & Mouse Connector (6-pins): CN18

Pin #	Assignment	Pin #	Assignment
1	Mouse Clock	2	Mouse Data
3	Keyboard Clock	4	Keyboard Data
5	Ground	6	+5V

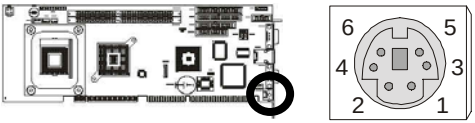
- **Figure:**



◆ PS/2 Keyboard/Mouse Connector (Mini Din 6 Pins): CN19

Pin #	Assignment	Pin #	Assignment
1	Keyboard Data	2	Mouse Data
3	Ground	4	+5V
5	Keyboard Clock	6	Mouse Clock

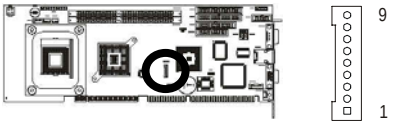
- **Figure:**



◆ **Extension Audio Connector (9-pins Pin-Header): CN21**

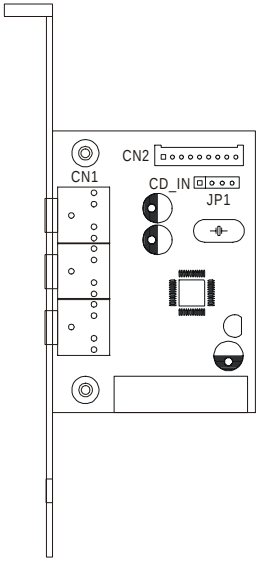
Pin #	Assignment
1	+12V
2	3.3V
3	AC_SYNC
4	AC_SDOUT
5	Ground
6	AC_BCLK
7	Ground
8	AC_RST#
9	AC_SDIN0

- **Figure:**

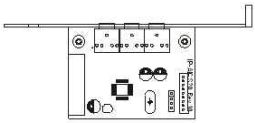


2.5 Optional Audio Card Board Location:

Thank you for select Audio Card, here is the description about how to connect the connector and phone jack to use audio functions.



1. Check the contents of the packing:
   - ◆ Audio Card
   - ◆ Audio 9-pins round cable



2. Table for Audio Card Description of Connector:

Connectors	Functions
JP1	CD_IN Connector
CN1	Audio Line_In, Line_Out, MIC Phone Jack
CN2	Audio Signal Connector

3. Description of Connector:

◆ **CD_IN Connector: JP1**

Pin #	Assignment
1	Left
2	Ground
3	Ground
4	Right

◆ **Audio Line_In, Line_Out, MIC Phone Jack: CN1**

Pin #	Assignment
1	Line_In
2	Line_Out
3	MIC

◆ **Audio Signal Connector (9-pins): CN2**

Pin #	Assignment
1	+12V
2	3.3V
3	AC_SYNC
4	AC_SDOUT
5	Ground
6	AC_BCLK
7	Ground
8	AC_RST#
9	AC_SDIN0

SECTION 3

AWARD BIOS SETUP

3.1 BIOS Instructions

Award's ROM BIOS provides a built-in Setup program, which allows user to modify the basic system configuration and hardware parameters. The modified data will be stored in a battery-backed CMOS, so that data will be retained even when the power is turned off. In general, the information saved in the CMOS RAM will stay unchanged unless there is a configuration change in the system, such as hard drive replacement or a device is added.

It is possible for the CMOS battery to fail, this will cause data loss in the CMOS only. If this does happen you will need to reconfigure your BIOS settings.

3.2 Main Menu

Once you enter the AwardBIOS™ CMOS Setup Utility, the Main Menu will appear on the screen. The Main Menu allows you to select from several setup functions and two exit choices. Use the arrow keys to select among the items and press <Enter> to accept and enter the sub-menu.

Phoenix - AwardBIOS CMOS Setup Utility

Standard CMOS Feature	Frequency/Voltage Control
Advanced BIOS Feature	Load Fail-Safe Defaults
Advanced Chipset Feature	Load Optimized Defaults
Integrated Peripherals	Set Supervisor Password
Power Management Setup	Set User Password
PnP/PCI Configurations	Save & Exit Setup
PC Health Status	Exit Without Saving
Esc: Quit	↑↓←→: Select Item
F10: Save & Exit Setup	
Time, Date, Hard Disk Type….	

Note: that a brief description of each highlighted selection appears at the bottom of the screen.

Setup Items:
The main menu includes the following main setup categories. Recall that some systems may not include all entries.

Standard CMOS Features:
Use this menu for basic system configuration. See Section 2 for the details.

Advanced BIOS Features:
Use this menu to set the Advanced Features available on your system. See Section 3 for the details.

Advanced Chipset Features:
Use this menu to change the values in the chipset registers and optimize your system's performance. See section 4 for the details.

Integrated Peripherals:
Use this menu to specify your settings for integrated peripherals. See section 4 for the details.

Power Management Setup:
Use this menu to specify your settings for power management. See section 5 for the details.

PnP / PCI Configuration:
This entry appears if your system supports PnP / PCI. See section 6 for the details.

PC Health Status:
Use this menu to show your system temperature, speed and voltage status.

Frequency/Voltage Control:
Use this menu to specify your settings for frequency/voltage control. See section 7 for the details.

Load Fail-Safe Defaults:
Use this menu to load the BIOS default values for the minimal/stable performance for your system to operate. See section 8 for the details.

Load Optimized Defaults:
Use this menu to load the BIOS default values that are factory settings for optimal performance system operations. While Award has designed the custom BIOS to maximize performance, the factory has the right to change these defaults to meet their needs. See section 8 for the details.

Supervisor/User Password:
Use this menu to set User and Supervisor Passwords. See section 9 for the details.

Save & Exit Setup:
Save CMOS value changes to CMOS and exit setup. See section 10 for the details.

Exit Without Save:
Abandon all CMOS value changes and exit setup. See section 10 for the details.

3.3 Standard CMOS Features

The items in Standard CMOS Setup Menu are divided into 10 categories. Each category includes no, one or more than one setup items. Use the arrow keys to highlight the item and then use the <PgUp> or <PgDn> keys to select the value you want in each item.

Standard CMOS Features

Date (mm:dd:yy):	Mon, Aug 4 2003	Item Help
Time (hh:mm:ss):	16:19:20	
➢ IDE Primary Master	13579 MB	Menu Level ➢
➢ IDE Primary Slave	None	
➢ IDE Secondary Master	None	Change the day, month, year and century
➢ IDE Secondary Slave	None	
Drive A	1.44M, 3.5 in.	
Drive B	None	
Video	EGA/VGA	
Halt On	All, But Keyboard	
Based Memory	640K	
Extended Memory	515072K	
Total Memory	516096K	

↑↓←→Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

Date: Options Month/DD/YYYY
Set the system date. Note that the 'Day' automatically changes when you set the date.

Time: Options HH : MM : SS
Set the system time.

IDE Primary Master: Options are in its sub menu (described in 3.4)
Press <Enter> to enter the sub menu of detailed options.

IDE Primary Slave: Options are in its sub menu (described in 3.4)
Press <Enter> to enter the sub menu of detailed options.

IDE Secondary Master: Options are in its sub menu (described in 3.4)
Press <Enter> to enter the sub menu of detailed options.

IDE Secondary Master: Options are in its sub menu (described in 3.4)
Press <Enter> to enter the sub menu of detailed options.

Drive A/ Drive B: Options None 360K, 5.25 in/1.2M, 5.25 in/720K, 3.5 in/ 1.44M, 3.5 in/2.88M, 3.5 in
Select the type of floppy disk drive installed in your system.

Video: Options EGA/VGA/CGA 40/CGA 80/MONO
Select the default video device.

Halt On: Options All Errors/No Errors/All, but Keyboard/All, but Diskette/All, but Disk/Key
Select the situation in which you want the BIOS to stop the POST process and notify you.

Base Memory:
Displays the amount of conventional memory detected during boot up.

Extended Memory:
Displays the amount of extended memory detected during boot up

Total Memory:
Displays the total memory available in the system

3.4 IDE Adapters

The IDE adapters control the hard disk drive. Use a separate sub menu to configure each hard disk drive.

Phoenix - AwardBIOS CMOS Setup Utility
IDE Primary Master

IDE HDD Auto-Detection	Press Enter	Item Help
IDE Primary Master	Auto	Menu Level ➢➢
Access Mode	Auto	
Capacity	13579 MB	To auto-detect the HDD's size, head... on this channel
Cylinder	26310	
Head	16	
Precomp	0	
Landing Zone	26309	
Sector	63	

↑↓←→Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

IDE HDD Auto-detection: Options Press Enter
Press Enter to auto-detect the HDD on this channel. If detection is successful, it fills the remaining fields on this menu.

IDE Primary Master: Options None, Auto and Manual
Selecting "Manual" lets you set the remaining fields on this screen. Selects the type of fixed disk. "User Type" will let you select the number of cylinders, heads, etc. Note: PRECOMP=65535 means NONE !

Access Mode: Options CHS, LBA, Large and Auto
Choose the access mode for this hard disk

Capacity: Options Auto Display your disk drive size
Disk drive capacity (Approximated). Note that this size is usually slightly greater than the size of a formatted disk given by a disk-checking program.

The following options are selectable only if the ‘IDE Primary Master’ item is set to ‘Manual’

Cylinder: Options Min = 0, Max = 65535
Set the number of cylinders for this hard disk.

Head: Options Min = 0, Max = 255
Set the number of read/write heads

Precomp: Options Min = 0, Max = 65535
**** **Warning**: Setting a value of 65535 means no hard disk

Landing zone: Options Min = 0, Max = 65535
****

Sector: Options Min = 0, Max = 255
Number of sectors per track

3.5 Advanced BIOS Features

This section allows you to configure your system for basic operation. You have the opportunity to select the system's default speed, boot-up sequence, keyboard operation, shadowing and security.

Phoenix - AwardBIOS CMOS Setup Utility

Advanced BIOS Features

Virus Warning	Enabled	Item Help
CPU L1 & L2 Cache	Enabled	
CPU Hyper-Threading	Enabled	Menu Level ➢
Quick Power On Self Test	Enabled	
First Boot Device	Floppy	Allow you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep
Second Boot Device	HDD-0	
Third Boot Device	LS-120	
Boot Other Device	Enabled	
Swap Floppy Drive	Disabled	
Boot Up Floppy Seek	Enabled	
Boot Up NumLock Status	On	
Gate A20 Option	Normal	
Typematic Rate Setting	Disabled	
X Typematic Rate (Chars/Sec)	6	
X Typematic Delay (Msec)	250	
Security Option	Setup	
APIC Mode	Disabled	
X MPS Version Control For OS	1.1	
OS Select For DRAM > 64MB	Non-OS2	
Report No FDD For Win 95	No	

↑↓←→Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

Virus Warning:

Allow you to choose the VIRUS Warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempts to write data into this area, BIOS will show a warning message on screen and alarm beep.

Enabled---Activates automatically when the system boots up causing a warning message to appear when anything attempts to access the boot sector or hard disk partition table.

Disabled---No warning message will appear when anything attempts to access the boot sector or hard disk partition table.

CPU L1& L2 Cache:
These two categories speed up memory access. However, it depends on CPU/chipset design.

Enabled---Enable cache
Disabled---Disable cache

CPU Hyper-Threading:
Allow you to choose the CPU Hyper-Threading Technology.

Enabled---Enable CPU Hyper-Threading
Disabled--- Disabled CPU Hyper-Threading

Quick Power On Self Test:
This category speeds up Power On Self Test (POST) after you power up the computer. If it is set to Enable, BIOS will shorten or skip some check items during POST.

Enabled---Enable quick POST
Disabled--- Normal POST

First/Second/Third Boot Device:
The BIOS attempts to load the operating system from the devices in the sequence selected in these items.

The Choice: Floppy, LS/ZIP, HDD, SCSI, CDROM, LAN and Disabled.

Boot Other Device:
When enabled, the system searches all other possible locations for an operating system if it fails to find one in the devices specified under the first, second, and third boot devices.

The Choice: Enabled, Disabled

Swap Floppy Drive:
If the system has two floppy drives, you can swap the logical drive name assignments.

The choice: Enabled, Disabled.

Boot Up Floppy Seek:
Seeks disk drives during boot up. Disabling speeds boot up.

The choice: Enabled, Disabled.

Boot Up NumLock Status:
Select power on state for NumLock.
The choice: On, Off

Gate A20 Option:
Select if chipset or keyboard controller should control GateA20.
Normal---A pin in the keyboard controller controls GateA20
Fast---Lets chipset control GateA20

Typematic Rate Setting:
Keystrokes repeat at a rate determined by the keyboard controller. When enabled, the typematic rate and typematic delay can be selected.
The choice: Enabled, Disabled.

Typematic Rate (Chars/Sec):
Sets the number of times a second to repeat a keystroke when you hold the key down.
The choice: 6, 8, 10, 12, 15, 20, 24 and 30.

Typematic Delay (Msec):
Sets the delay time after the key is held down before it begins to repeat the keystroke.
The choice: 250, 500, 750 and 1000.

Security Option:
Select whether the password is required every time the system boots or only when you enter setup.
System---The system will not boot and access to Setup will be denied if the correct password is not entered at the prompt.
Setup---The system will boot, but access to Setup will be denied if the correct password is not entered at the prompt.

Note: To disable security, select PASSWORD SETTING at Main Menu and then you will be asked to enter password. Do not type anything and just press <Enter>, it will disable security. Once the security is disabled, the system will boot and you can enter Setup freely.

APIC Mode:
This item allows you to enable/disable APIC Mode.
The choice: Enabled, Disabled.

MPS Version Control For OS:
Select the operating system that is Multi-Processors Version Control for OS.
The choice: 1.4, 1.1.

OS Select For DRAM > 64MB:
Select the operating system that is running with greater than 64MB of RAM on the system.
The choice: Non-OS2, OS2.

Report No FDD For Win 95:
Whether report no FDD for Win 95 or not.
The choice: Yes, No.

3.6 Advanced Chipset Features

This section allows you to configure the system based on the specific features of the installed chipset. This chipset manages bus speeds and access to system memory resources, such as DRAM and the external cache. It also coordinates communications between the conventional ISA bus and the PCI bus. It must be stated that these items should never need to be altered. The default settings have been chosen because they provide the best operating conditions for your system. The only time you might consider making any changes would be if you discovered that data was being lost while using your system.

Phoenix - AwardBIOS CMOS Setup Utility

Advanced Chipset Features

DRAM Timing Selectable	By SPD	Item Help
X CAS Latency Time	2.5	
X Active to Precharge Delay	6	
X DRAM RAS# to CAS# Delay	3	Menu Level ➢
X DRAM RAS# Precharge	3	
Memory Frequency For	Auto	
System BIOS Cacheable	Enabled	
Video BIOS Cacheable	Disabled	
Memory Hole At 15M-16M	Disabled	
Delayed Transaction	Enabled	
Delay Prior to Thermal	16Min	
AGP Aperture Size (MB)	64	
On-Chip VGA Setting		
On-Chip VGA	Enabled	
On-Chip Frame Buffer Size	8MB	

↑↓←→Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

DRAM Timing Selectable:
Select the operating system that is selecting DRAM timing, so select SPD for setting SDRAM timing by SPD.

The choice: Manual, SPD

CAS Latency Time:
When synchronous DRAM is installed, the number of clock cycles of CAS latency depends on the DRAM timing.
The choice: 1.5, 2, and 2.5.

Active To Precharge Delay:
Select the operating system that is active to precharge delay.
The choice: 5, 6, 7

DRAM RAS# to CAS# Delay:
You can select RAS to CAS Delay time in HCLKs of 2/2 or 3/3.
The system board designer should set the values in this field, depending on the DRAM installed. Do not change the values in this field unless you change specifications of the installed DRAM or the installed CPU.
The choice: 2, 3.

DRAM RAS# Precharge:
If an insufficient number of cycles are allowed for the RAS to accumulate its charge before DRAM refresh, the refresh may be incomplete and the DRAM may fail to retain data. Fast gives faster performance; and Slow gives more stable performance. This field applies only when synchronous DRAM is installed in the system.
The choice: 2, 3.

Memory Frequency For:
You can use this item to select operating frequency for the main system memory.
The choice: Auto, DDR266 and DDR333

System BIOS Cacheable:
Selecting “Enabled” allows caching of the system BIOS ROM at F0000h-FFFFFh, resulting in better system performance. However, if any program writes to this memory area, a system error may result.
The choice: Enabled, Disabled.

Video BIOS Cacheable:
Select “Enabled” allows caching of the video BIOS, resulting in better system performance. However, if any program writes to this memory area, a system error may result.

The choice: Enabled, Disabled.

Memory Hole At 15M-16M:
You can reserve this area of system memory for ISA adapter ROM. When this area is reserved, it cannot be cached. The user information of peripherals that need to use this area of system memory usually discusses their memory requirements.

The choice: Enabled, Disabled.

Delayed Transaction:
The chipset has an embedded 32-bit posted write buffer to support delay transactions cycles. Select “Enabled” to support compliance with PCI specification version 2.1.

The choice: Enabled, Disabled.

Delay Prior to Thermal:
Select this item allows the delay prior to thermal time.

The choice: 4, 8, 16, 32 Min.

AGP Aperture Size (MB):
This field determines the effective size of the Graphic Aperture used for a particular GMCH configuration. It can be updated by the GMCH-specific BIOS configuration sequence before the PCI standard bus enumeration sequence takes place. If it is not updated then a default value will select an aperture of maximum size.

The choice: 4, 8, 16, 32, 64, 128 and 256

On-Chip VGA:
You can use this item to select on-chip VGA for the main system VGA.

The choice: Enabled, Disabled.

On-Chip Frame Buffer Size:
You can use this item to select frame buffer size.

The choice: 1MB, 8MB.

3.7 Integrated Peripherals

Phoenix - AwardBIOS CMOS Setup Utility
Integrated Peripherals

On-Chip Primary PCI IDE	Enabled	Item Help
IDE Primary Master PIO	Auto	
IDE Primary Slave PIO	Auto	
IDE Primary Master UDMA	Disabled	Menu Level ➢
IDE Primary Slave UDMA	Disabled	
On-Chip Secondary PCI IDE	Enabled	
IDE Secondary Master PIO	Auto	
IDE Secondary Slave PIO	Auto	
IDE Secondary Master UDMA	Disabled	
IDE Secondary Slave UDMA	Disabled	
USB Controller	Enabled	
USB 2.0 Controller	Enabled	
USB Keyboard Support	Disabled	
USB Mouse Support	Disabled	
AC97 Audio	Auto	
Init Display First	PCI Slot	
IDE HDD Block Mode	Disabled	
Onboard Lan Boot ROM		
Onboard FDC Controller	Enabled	
Onboard Serial Port 1	3F8/IRQ4	
Onboard Serial Port 2	2F8/IRQ3	
UART Mode Select	Normal	
X RxD, TxD Active	Hi, Lo	
X IR Transmission Delay	Enabled	
X UR2 Duplex Mode	Half	
X Use IR Pins	IR-Rx2Tx2	
Onboard Parallel Port	378/IRQ7	
Parallel Port Mode	SPP	
X EPP Mode Select	EPP1.9	
X ECP Mode Use DMA	3	
PWRON After PWR-Fail	Off	

↑↓←→Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

OnChip Primary/Secondary PCI IDE:
The integrated peripheral controller contains an IDE interface with support for two IDE channels. Select “Enabled” to activate each channel separately.
The choice: Enabled, Disabled.

IDE Primary/Secondary Master/Slave PIO:
The four IDE PIO (Programmed Input/Output) fields let you set a PIO mode (0-4) for each of the four IDE devices that the onboard IDE interface supports. Modes 0 through 4 provide successively increased performance. In Auto mode, the system automatically determines the best mode for each device.

The choice: Auto, Mode 0, Mode 1, Mode 2, Mode 3 and Mode 4.

IDE Primary/Secondary Master/Slave UDMA:
Ultra DMA/33 implementation is possible only if your IDE hard drive supports it and the operating environment includes a DMA driver (Windows 95 OSR2 or a third-party IDE bus master driver). If your hard drive and your system software both support Ultra DMA/33, select “Auto” to enable BIOS support.

The choice: Auto, Disabled.

USB Controller:
Select “Enabled” if your system contains a Universal Serial Bus (USB) controller and you have USB peripherals.

The choice: Enabled, Disabled.

USB 2.0 Controller:
Select “Enabled” if your system contains a Universal Serial Bus 2.0 (USB 2.0) controller and you have USB peripherals.

The choice: Enabled, Disabled.

USB Keyboard Support:
Select “Enabled” if your system contains a Universal Serial Bus (USB) controller and you have a USB keyboard.

The choice: Enabled, Disabled.

USB Mouse Support:
Select “Enabled” if your system contains a Universal Serial Bus (USB) controller and you have a USB mouse.

The choice: Enabled, Disabled.

AC97 Audio:
This item allows you to decide to auto or disable the chipset family to support AC97 Audio.

The choice: Auto, Disabled.

Init Display First:
This item allows you to decide to active whether PCI Slot or on-chip VGA first.

The choice: PCI Slot, Onboard.

IDE HDD Block Mode:
Block mode is also called block transfer, multiple commands, or multiple sector read/write. If your IDE hard drive supports block mode (most new drives do), select Enabled for automatic detection of the optimal number of block read/writes per sector the drive can support.

The choice: Enabled, Disabled

Onboard Lan Boot ROM:
This item allows you to enable or disable the onboard LAN Boot ROM.

The choice: Enabled, Disabled

Onboard FDC Controller:
Select “Enabled” if your system has a floppy disk controller (FDC) installed on the system board and you wish to use it. If you install and-in FDC or the system has no floppy drive, select Disabled in this field.

The choice: Enabled, Disabled.

Onboard Serial Port 1/Port 2:
Select an address and corresponding interrupt for the first and second serial ports.

The choice: 3F8/IRQ4, 2E8/IRQ3, 3E8/IRQ4, 2F8/IRQ3, Disabled and Auto.

UART Mode Select:
This item allows you to determine which Infra Red (IR) function of onboard I/O chip.

The Choice: Normal, IrDA and ASKIR.

RxD, TxD Active:
This item allows you to determine the active of RxD, TxD.

The Choice: “Hi, Hi”, “Lo, Lo”, “Lo, Hi” and “Hi, Lo”.

IR Transmission Delay:
This item allows you to enable/disable IR transmission delay.
The choice: Enabled, Disabled.

UR2 Duplex Mode:
This item allows you to select the IR half/full duplex function.
The choice: Half, Full.

Use IR Pins:
This item allows you to select IR transmission routes, one is RxD2m, TxD2 (COM Port) and the other is IR-Rx2Tx2.
The choice: IR-Rx2Tx2, RxD2 and TxD2.

Onboard Parallel Port:
This item allows you to determine access onboard parallel port controller with which I/O address.
The choice: 3BC/IRQ7, 378/IRQ7, 278/IRQ5 and Disabled.

Parallel Port Mode:
Select an operating mode for the onboard parallel (printer) port. Select Normal, Compatible, or SPP unless you are certain your hardware and software both support one of the other available modes.
The choice: SPP, EPP, ECP and ECP+EPP, Normal.

EPP Mode Select:
Select EPP port type 1.7 or 1.9.
The choice: EPP1.7, 1.9.

ECP Mode Use DMA:
Select a DMA channel for the parallel port for use during ECP mode.
The choice: 3, 1.

PWRON After PWR-Fail:
This item allows you to select if you want to power on the system after power failure.
The choice: Off, On and Former-Sts.

3.8 Power Management Setup

The Power Management Setup allows you to configure you system to most effectively save energy while operating in a manner consistent with your own style of computer use.

Phoenix - AwardBIOS CMOS Setup Utility
Power Management Setup

ACPI Function	Enabled	Item Help
Power Management	User Define	
Video Off Method	Blank Screen	
Video Off In Suspend	No	Menu Level ➢
Suspend Type	Stop Grant	
MODEM Use IRQ	3	
Suspend Mode	Disabled	
HDD Power Down	Disabled	
Soft-Off by PWR-BTTN	Instant-Off	
CPU THRM-Throttling	87.5%	
Wake-Up by PCI card	Enabled	
Power On by Ring	Disabled	
Resume by Alarm	Disabled	
X Date (of Month) Alarm	0	
X Time (hh:mm:ss) Alarm	0 0 0	
Reload Global Timer Events		
Primary IDE 0	Disabled	
Primary IDE 1	Disabled	
Secondary IDE 0	Disabled	
Secondary IDE 1	Disabled	
FDD, COM, LPT Port	Disabled	
PCI PIRQ [A-D]#	Disabled	

↑↓←→Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

ACPI Function:
This item allows you to enable/disable the Advanced Configuration and Power Management (ACPI).

The choice: Enabled, Disabled.

Power Management:
This category allows you to select the type (or degree) of power saving and is directly related to the following modes:

1. HDD Power Down
2. Doze Mode
3. Suspend Mode

Min. Power Saving:
Minimum power management. Doze Mode = 1 hr. Standby Mode = 1 hr., Suspend Mode = 1 hr., and HDD Power Down = 15 min.

Max. Power Saving:
Maximum power management -- **ONLY AVAILABLE FOR SL CPU's**. Doze Mode = 1 min., Standby Mode = 1 min., Suspend Mode = 1 min., and HDD Power Down = 1 min.

User Defined:
Allow you to set each mode individually. When not disabled, each of the ranges is from 1 min. to 1 hr. except for HDD Power Down, which ranges from 1 min. to 15 min. and disable.

Video Off Method:
This determines the manner in which the monitor is blanked.

V/H SYNC+Blank:
This selection will cause the system to turn off the vertical and horizontal synchronization ports and write blanks to the video buffer.

Blank Screen:
This option only writes blanks to the video buffer.

DPMS:
Initial display power management signaling.

Video Off Method:
This item allows you to on/off Method function.
The choice: Yes, No.

Video Off In Suspend:
This determines the manner in which the monitor is blanked.
The choice: Yes, No.

Suspend Type:
Select the Suspend Type.
The choice: PwrOn Suspend, Stop Grant.

MODEM Use IRQ:
This determines the IRQ in which the MODEM can use.
The choice: 3, 4, 5, 7, 9, 10, 11 and NA.

Suspend Mode:
When “Enabled” and after the set time of system inactivity. All devices except the CPU will be shut off.
The choice: Disabled, 1, 2, 4, 8, 12, 20, 30, 40 Min and 1Hour.

HDD Power Down:
When “Enabled” and after the set time of system inactivity, the hard disk drive will be powered down while all other devices remain active.
The choice: Disabled, 1~15Min.

Soft-Off by PWR-BTTN:
Pressing the power button for more than 4 seconds forces the system to enter the Soft-Off state when the system has “hung.”
The choice: Delay 4 Sec, Instant-Off.

CPU THRM-Throttling:
Select the CPU THRM-Throttling rate.
The choice: 12.5%, 25.0%, 37.5%, 50.0%, 62.5%, 75.0% and 87.5%.

Wake-Up by PCI Card:
An input signal from PME on the PCI card awakens the system from a soft off state.
The choice: Enabled, Disabled.

Power On by Ring:
An input signal on the serial Ring Indicator (RI) line (in other words, an incoming call on the modem) awakens the system from a soft off state.
The choice: Enabled, Disabled.

Resume by Alarm:
When “Enabled”, your can set the date and time at which the RTC (real-time clock) alarm awakens the system from Suspend mode.
The choice: Enabled, Disabled.

Reload Global Timer Events:
The events are I/O events whose occurrence can prevent the system from entering a power saving mode or can awaken the system from such a mode. In effect, the system remains alert for anything, which occurs to a device, which is configured as Enabled, even when the system is in a power down mode.

Primary IDE 0
Primary IDE 1
Secondary IDE 0
Secondary IDE 1
FDD, COM, LPT Port
PCI PIRQ [A-D] #

3.9 PnP/PCI Configurations

This section describes configuring the PCI bus system. PCI, or **P**ersonal **C**omputer **I**nterconnect, is a system, which allows I/O devices to operate at speeds nearing the speed the CPU itself uses when communicating with its own special components. This section covers some very technical items and it is strongly recommended that only experienced users should make any changes to the default settings.

Phoenix - AwardBIOS CMOS Setup Utility
PnP/PCI Configurations

	Reset Configuration Data	Disabled	Item Help
	Resources Controlled By	Auto (ESCD)	
X	IRQ Resources	Press Enter	Menu Level ➢
	PCI/VGA Palette Snoop	Disabled	Default is Disabled. Select Enabled to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the OS cannot boot

↑↓←→Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

Reset Configuration Data:

Normally, you leave this field Disabled. Select “Enabled” to reset Extended System Configuration Data (ESCD) when you exit Setup if you have installed a new add-on and the system reconfiguration has caused such a serious conflict that the operating system cannot boot.

The choice: Enabled, Disabled.

Resource controlled by:
The Award Plug and Play BIOS has the capacity to automatically configure all of the boot and Plug and Play compatible devices. However, this capability means absolutely nothing unless you are using a Plug and Play operating system such as Windows®95. If you set this field to "Manual" choose specific resources by going into each of the sub menu that follows this field (a sub menu is preceded by a "➢").

The choice: Auto (ESCD), Manual.

IRQ Resources:
When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt.

PCI/VGA Palette Snoop:
Leave this field at "Disabled".

The choice: Enabled, Disabled.

3.10 PC Health Status

Phoenix - AwardBIOS CMOS Setup Utility
PC Health Status

CPU Warning Temperature	Disabled	Item Help
Current System Temp.	33°C / 91°F	
Current CPU1 Temperature	38°C / 100°F	
Current CPU Fan Speed	3835 RPM	Menu Level ➢
Current Chassis Fan Speed	4725RPM	
VDimm (V)	2.48V	
Vcore (V)	1.45V	
VCC3.3V	3.37V	
+ 5 V	5.08V	
+12 V	11.91V	
-12 V	-12.44	
-5V	-4.99V	
VBAT (V)	3.24V	
5VSB (V)	4.80	
Shutdown temperature	Disabled	

↑↓←→Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

CPU Warning Temperature:
This item will prevent CPU from overheating.
The choice: 50°C /122°F ~70°C /158°F, Disabled.

Current System Temp:
Show you the current system temperature.

Current CPU1 Temperature:
Show you the current CPU temperature.

Current CPU Fan Speed:
Show you the current CPU fan operating speed.

Current Chassis Fan Speed:
Show you the current chassis fan operating speed.

VDimm (V)
Show you the voltage level of the DRAM.

Vcore (V)
Show you the voltage level of CPU (Vcore).

VCC3.3V/+5V/+12V/-12V/-5V/5VSB(V):
Show you the voltage of 3.3V/+5V/+12V/-12V/-5V.

VBAT (V)
Show you the voltage level of the battery.

Shutdown Temperature:
This item allows you to set up the CPU shutdown Temperature. This item is only effective under Windows® 98 ACPI mode.

The choice: Disabled, 60°C / 140°F, 65°C / 149°F, 70°C / 158°F and 75°C / 167°F.

3.11 Frequency/Voltage Control

Phoenix - AwardBIOS CMOS Setup Utility
Frequency/Voltage Control

CPU Clock Ratio	19X	Item Help
Auto Detect PCI Clk	Enabled	
Spread Spectrum	Disabled	Menu Level ➢

↑↓←→Move Enter: Select +/-/PU/PD: Value F10: Save ESC: Exit F1: General Help
F5: Previous Values F6: Fail-safe defaults F7: Optimized Defaults

CPU Clock Ratio:
Use this item to select a multiplier for the system front side bus frequency.

Auto Detect PCI CLK:
When “Enabled”, this item will auto detect if the PCI socket have devices and will send clock signal to PCI devices. When disabled, it will send the clock signal to all PCI socket.

The choice: Enabled, Disabled.

Spread Spectrum:
This item allows you to enable/disable the spread spectrum modulated.

The choice: Enabled, Disabled.

3.12 Load Fail-Safe Defaults

When you press <Enter> on this item you get a confirmation dialog box with a message similar to:

Load Fail-Safe Defaults (Y/N)? N

Pressing “Y” loads the BIOS default values for the most stable, minimal-performance system operations.

3.13 Load Optimized Defaults

When you press <Enter> on this item you get a confirmation dialog box with a message similar to:

Load Optimized Defaults (Y/N)? N

Pressing “Y” loads the default values that are factory settings for optimal performance system operations.

3.14 Supervisor/User Password Setting

You can set either supervisor or user password, or both of then. The differences between are:

Set Supervisor Password: can enter and change the options of the setup menus.

Set User Password: just can only enter but do not have the right to change the options of the setup menus. When you select this function, the following message will appear at the center of the screen to assist you in creating a password.

ENTER PASSWORD:

Type the password, up to eight characters in length, and press <Enter>. The password typed now will clear any previously entered password from CMOS memory. You will be asked to confirm the password. Type the password again and press <Enter>. You may also press <Esc> to abort the selection and not enter a password.

To disable a password, just press <Enter> when you are prompted to enter the password. A message will confirm the password will be disabled. Once the password is disabled, the system will boot and you can enter Setup freely.

PASSWORD DISABLED.

When a password has been enabled, you will be prompted to enter it every time you try to enter Setup. This prevents an unauthorized person from changing any part of your system configuration.

Additionally, when a password is enabled, you can also require the BIOS to request a password every time your system is rebooted. This would prevent unauthorized use of your computer.

You determine when the password is required within the BIOS Features Setup Menu and its Security option (see Section 3). If the Security option is set to “System”, the password will be required both at boot and at entry to Setup. If set to “Setup”, prompting only occurs when trying to enter Setup.

3.15 Exit Selecting

Save & Exit Setup
Pressing <Enter> on this item asks for confirmation:

Save to CMOS and EXIT (Y/N)? Y

Pressing “Y” stores the selections made in the menus in CMOS – a special section of memory that stays on after you turn your system off. The next time you boot your computer, the BIOS configures your system according to the Setup selections stored in CMOS. After saving the values the system is restarted again.

Exit Without Saving
Pressing <Enter> on this item asks for confirmation:

Quit without saving (Y/N)? Y

This allows you to exit Setup without storing in CMOS any change. The previous selections remain in effect. This exits the Setup utility and restarts your computer.

Warranty Policy

Thank you for choosing ADLINK. To understand your rights and enjoy all the after-sales services we offer, please read the following carefully.

1. Before using ADLINK's products, please read the user manual and follow the instructions exactly. When sending in damaged products for repair, please attach an RMA application form.
2. All ADLINK products come with a two-year guarantee, free of repair charge.

The warranty period starts from the product's shipment date from ADLINK's factory

Peripherals and third-party products not manufactured by ADLINK will be covered by the original manufacturers' warranty

End users requiring maintenance services should contact their local dealers. Local warranty conditions will depend on the local dealers

3. Our repair service does not cover the two-year warranty, if damages are cause by the following events:
    a. Damage caused by not following instructions in the user's manual.
    b. Damage caused by carelessness on the users' part during product transportation.
    c. Damage caused by fire, earthquakes, floods, lightening, pollution and incorrect usage of voltage transformers.
    d. Damage caused by unsuitable storage environments with high temperatures, high humidity or volatile chemicals.
    e. Damage caused by leakage of battery fluid when changing batteries.
    f. Damages from improper repair by unauthorized technicians.
    g. Products with altered and damaged serial numbers are not entitled to our service.

Other categories not protected under our guarantees.

4. Customers are responsible for the fees regarding transportation of damaged products to our company or to the sales office.
5. To ensure the speed and quality of product repair, please download an RMA application form from our company website www.adlinktech.com. Damaged products with RMA forms attached receive priority.

For further questions, please contact our FAE staff.

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